

Regional Sediment Management

LTG Flowers stated:

“We need to move to a watershed approach as it applies to water resources projects so that *each of our projects fits into the context of a regional plan.*”

LTG Robert Flowers – e-mail to USACE on 19JUN02, commenting on his testimony to the Senate Environment and Public Works Committee hearing on Corps of Engineers water resources programs.

Welcome

Message

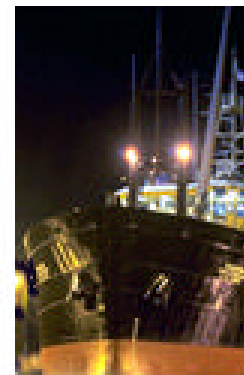
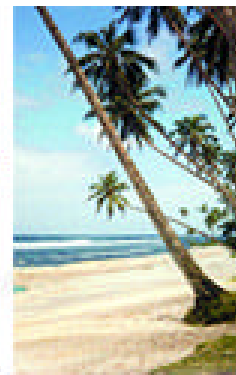
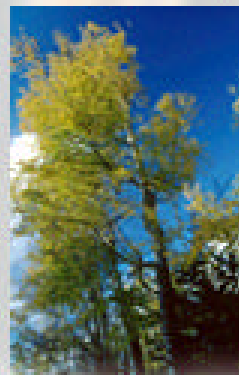
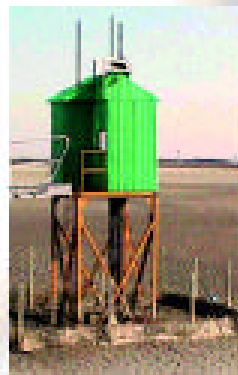
■ **Mission**

History

DOER Products

Credits

Exit



Dredging Operations & Environmental Research Program ...striking the balance

Navigation Dredging--The Mission

The U.S. Army Corps of Engineers' navigation mission is to "provide safe, reliable, efficient, and environmentally sustainable waterborne transportation systems (channels, harbors, and waterways) for movement of commerce, national security needs, and recreation." The operation and maintenance of these channels, harbors and waterways require a substantial amount of dredging. The mission also includes deepening of channels to accommodate ever-increasing vessel drafts. In today's high-tech world, environmentally sensitive activities are experiencing great scrutiny, and the cost of dredging is rising.

U.S. Army Corps of Engineers Division and District personnel execute the projects needed to fulfill the Corps' mission. For long-range as well as immediate problems, however, they rely on solutions based on research and work performed by the men and women from the U.S. Army Engineer Research and Development Center.

Galveston District's RSM Program Review FY04

- **Fostering Communication**

 - Project Delivery Team**

 - Stakeholder Workshops**

- **Leveraging Funds**

 - Regional Sediment Budget**

 - Conceptual Sediment Budget for Entire State**

 - Beneficial Use Projects and GIS**

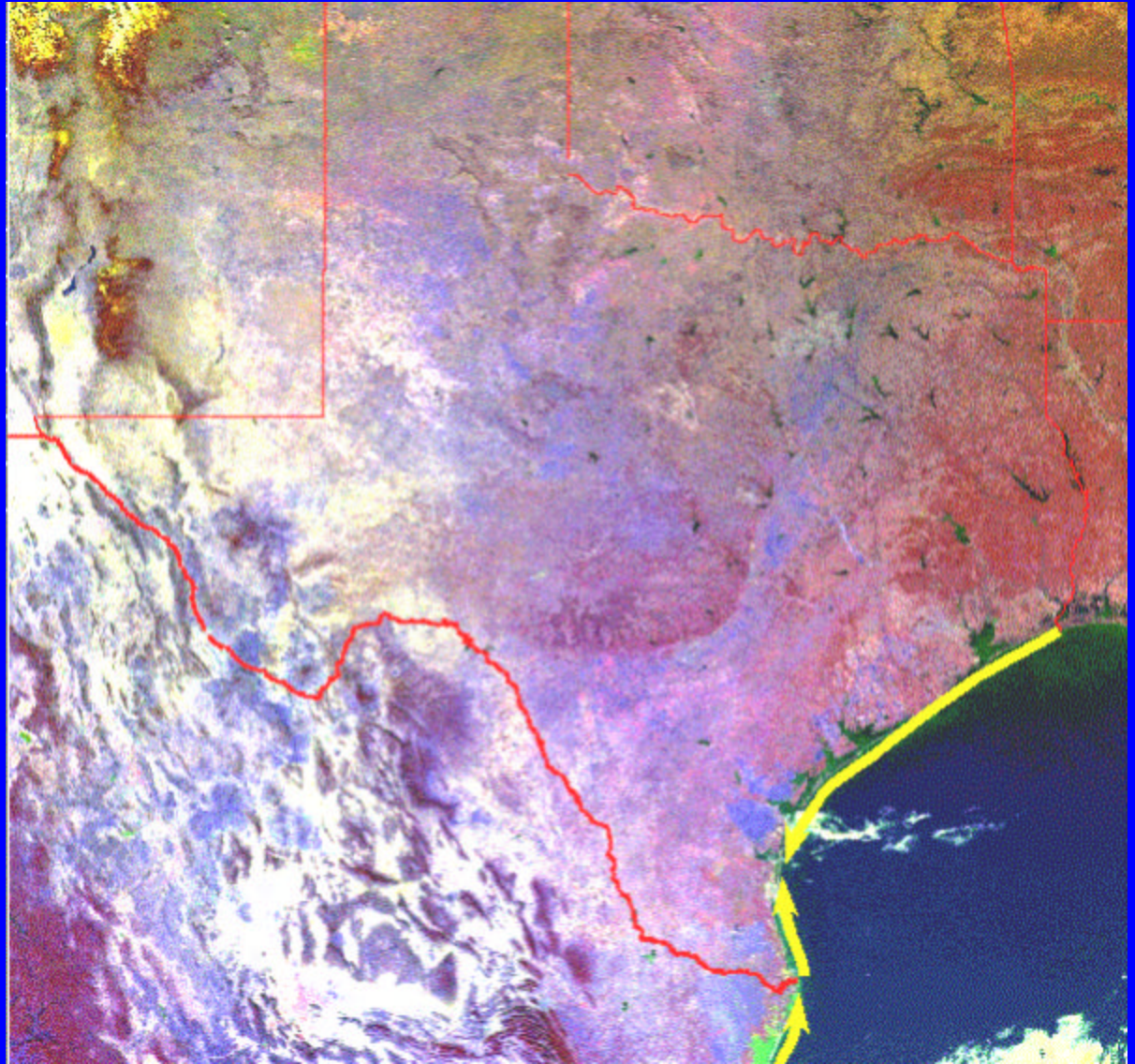
Stakeholder Workshops

- **Galveston (22 Jun) & Corpus Christi (24 Jun)**
- **Sponsored by USACE-SWG and Texas General Land Office**
- **Attended by Federal and State Resource Agencies, NGO's, Ports, Local Governments, Consultants & Academics**
- **Interactive Workshops facilitated by Group Solutions, Inc.**

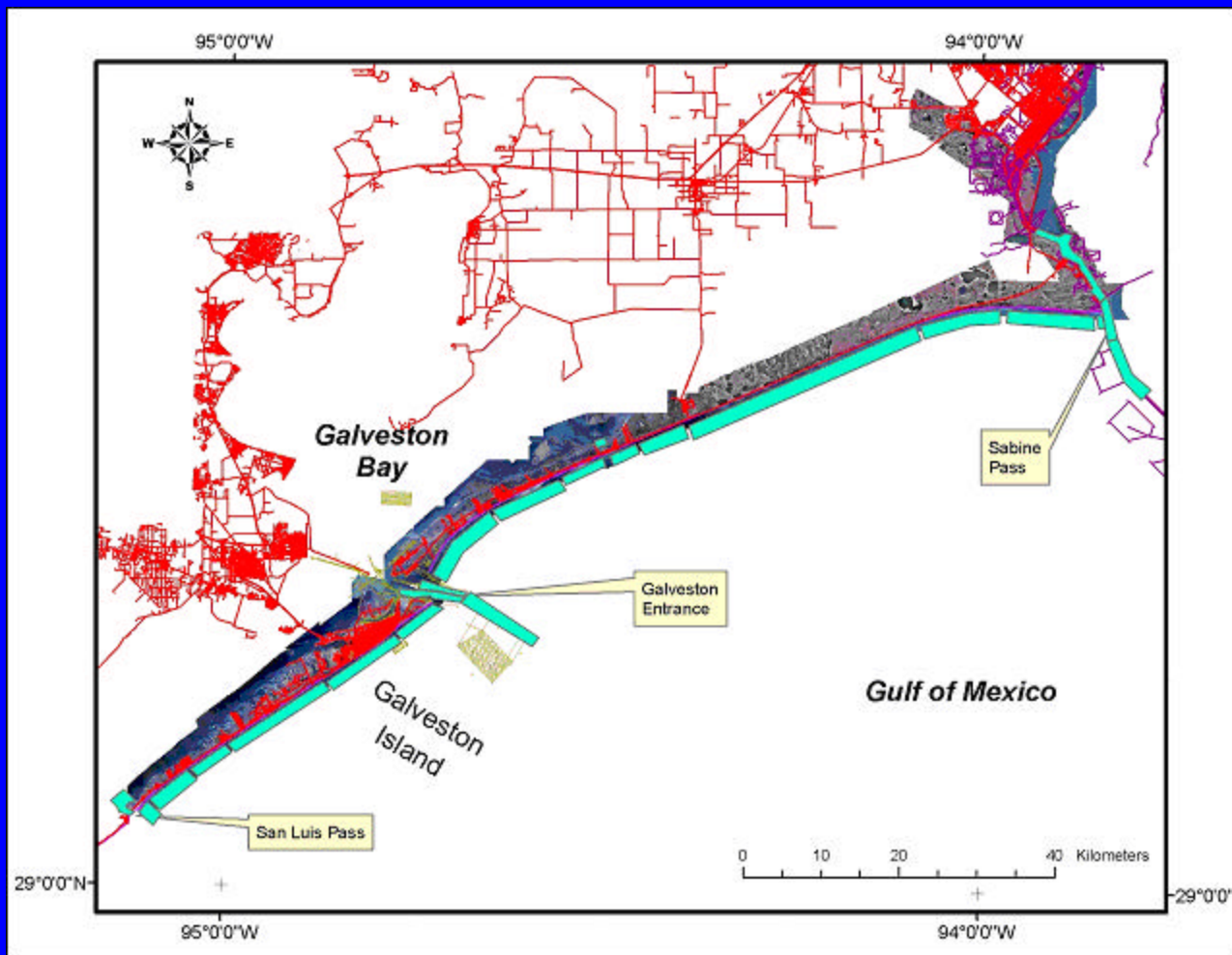
Data Assembly and Analysis

- **Dredging data** – compiled using Galveston District's Dredging Histories Database
- **Sediment data** - compiled using Galveston District's Dredging Histories Database
- **Shoreline data** – adopted Morton (1977) data set
- **Beach fill dredged material placement data** - compiled using Galveston District's Dredging Histories Database and several reports

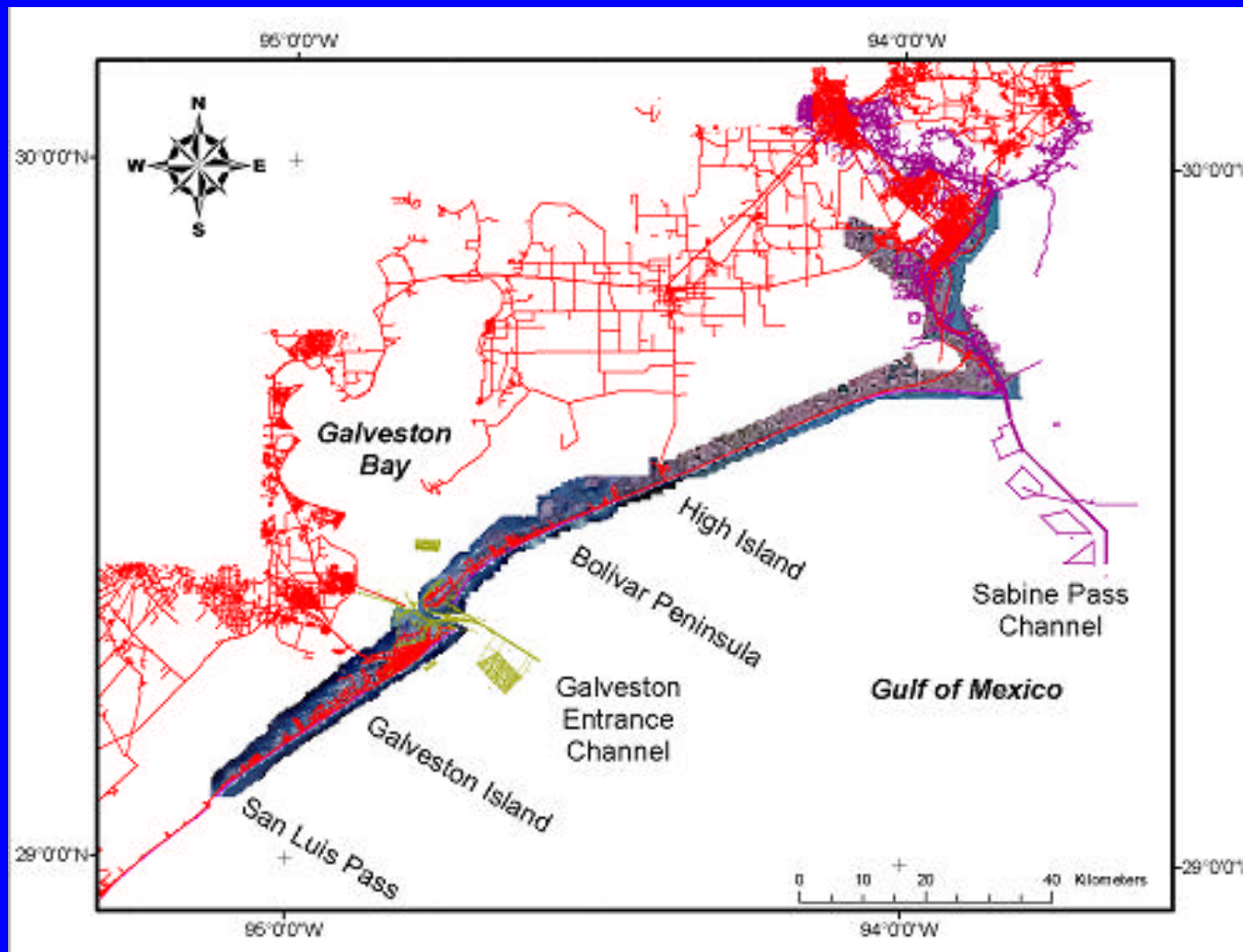
Regional Littoral Transport Patterns



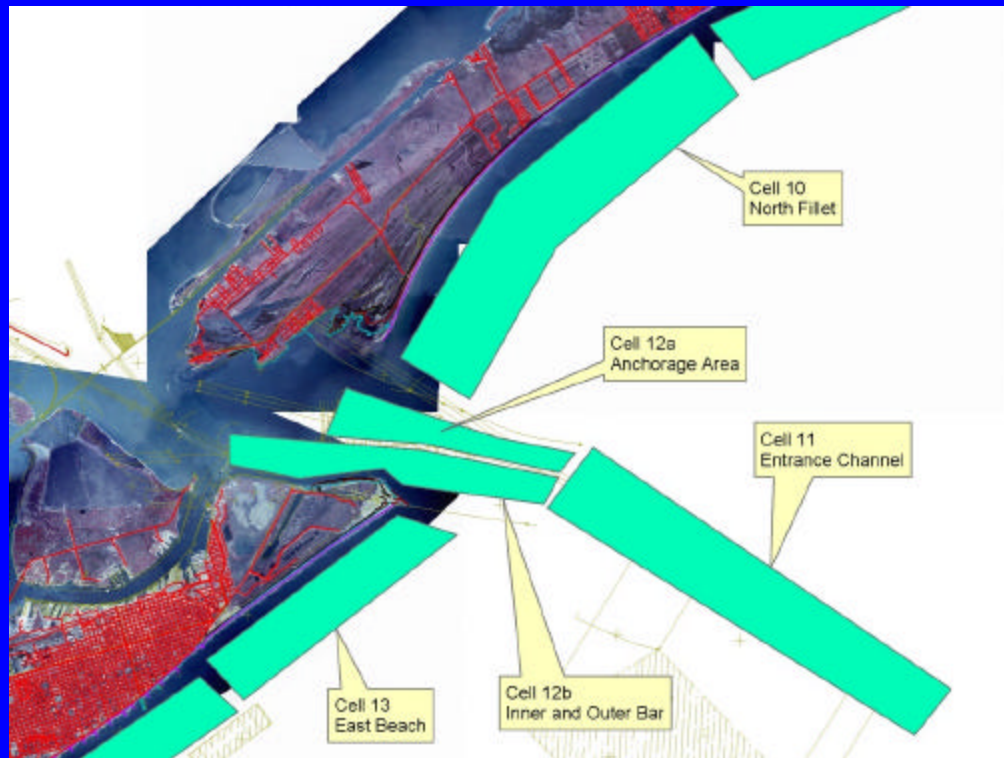
Regional Sediment Budget

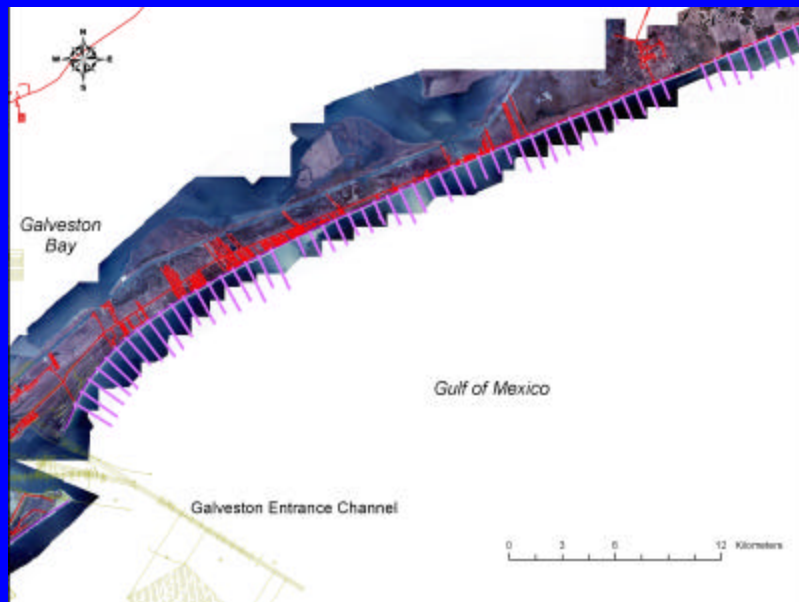


Regional Sediment Budget – Sabine Pass to San Luis Pass



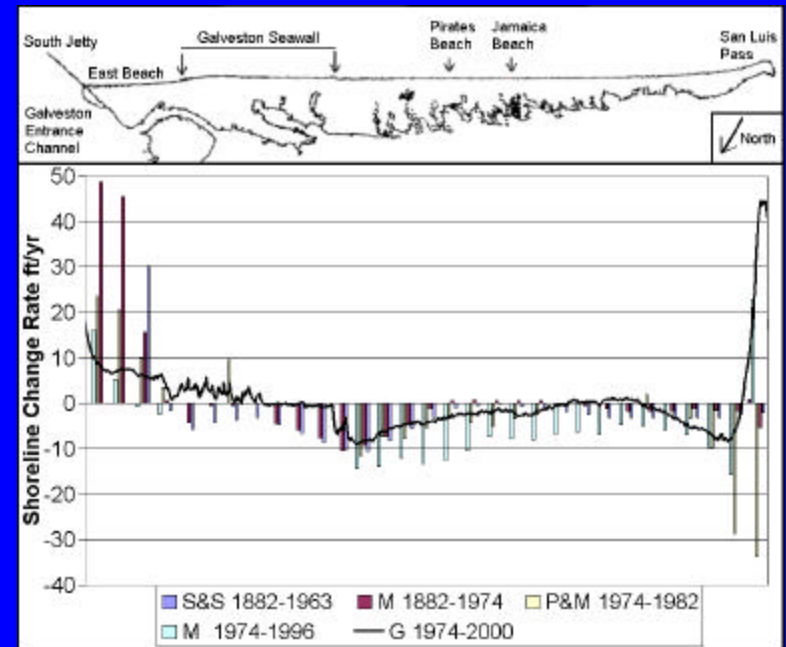
Houston-Galveston Ship Channel

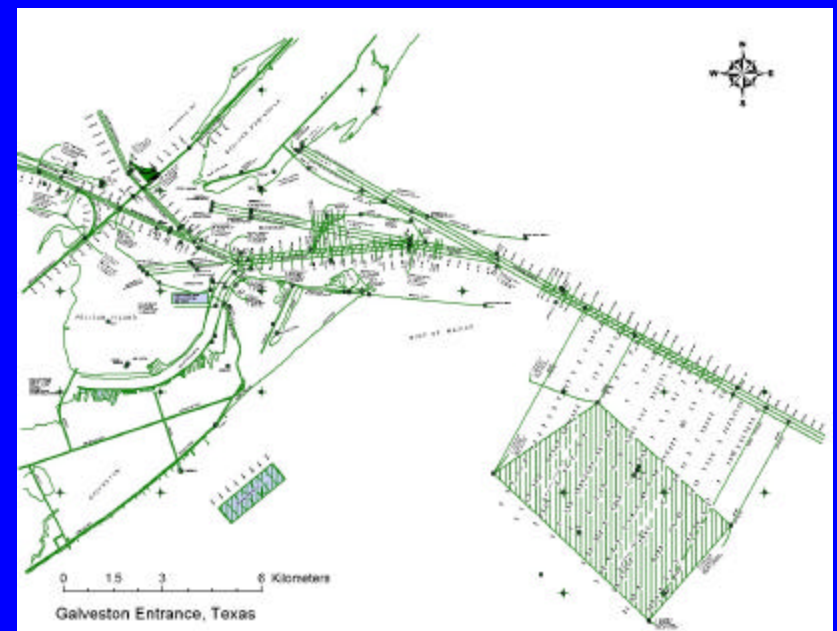




Beach Profiles – Bolivar Peninsula

Shoreline Change Analysis



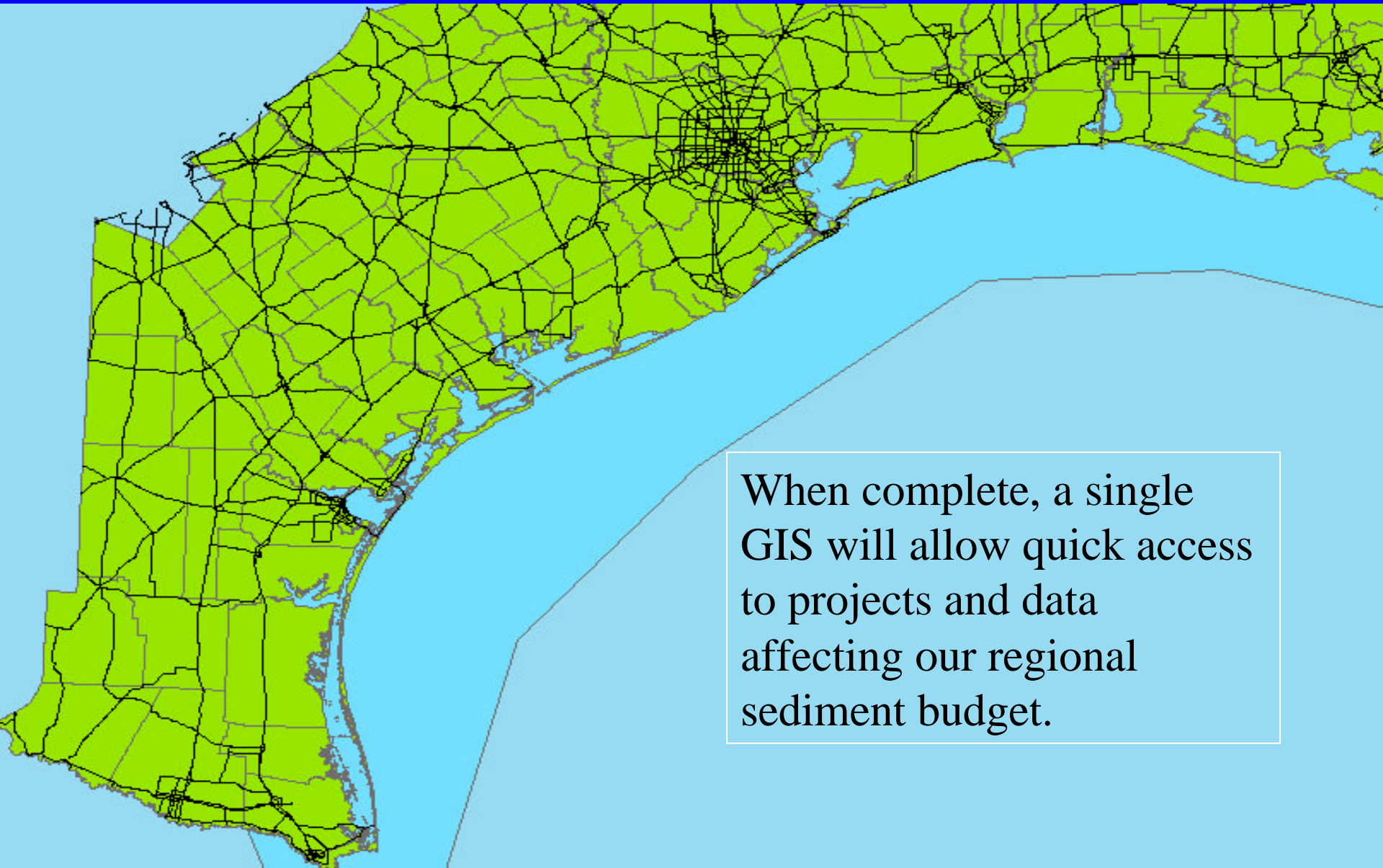


Dredge Statistics from Federal Navigation Projects


Existing/Planned SWG Beneficial Use Projects

- Identified over 50 existing and planned Beneficial Catalog projects that can be characterized as consistent with goals of RSM.
- Assembled Fact Sheets for each project.
- Projects include: beach placement, nearshore berm placement, creation of bird islands, marsh creation and restoration, etc.
- Entered into GIS.

A GIS for RSM in SWG



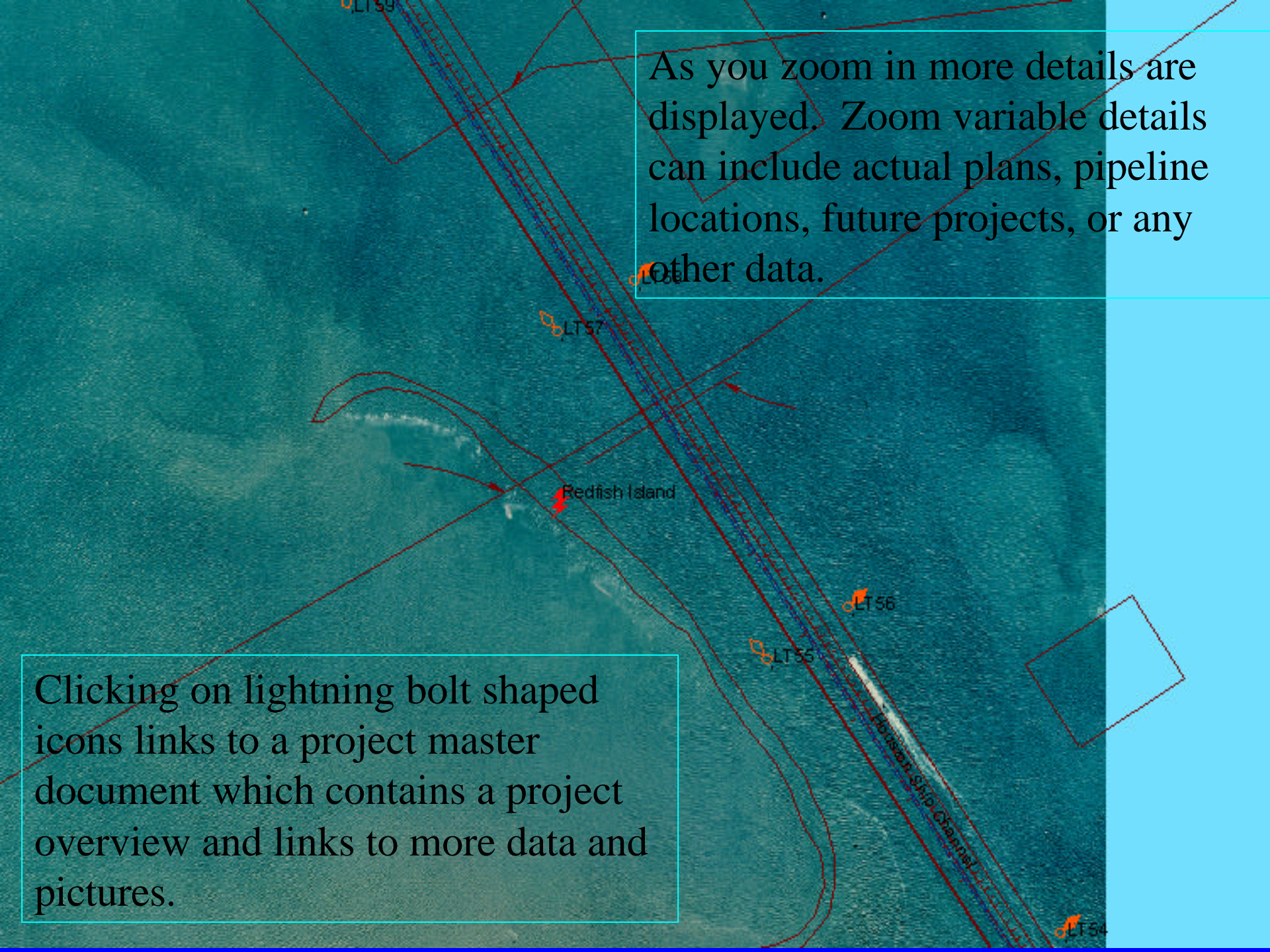
When complete, a single GIS will allow quick access to projects and data affecting our regional sediment budget.



The map displays the Houston Ship Channel and its connections to the Gulf of Mexico. Key features include the Trinity River at the top, Redfish Island, and the Houston Ship Channel itself. Other labeled areas include Texas City, Galveston Bay, and the Gulf of Mexico (GOM). Several project locations are marked with red lightning bolts: Redfish Island, Evia Island, HGNC Entrance Channel, and Underwater Nearshore Berms. The map also shows various waterways and channels, including the Galveston Bay Waterway (GBWW) and the Gulf of Mexico Waterway (GOMW).

To find a project, just zoom in on the region you are interested in.

If you know the name of the project you are interested in but not its location, query the project location table.



As you zoom in more details are displayed. Zoom variable details can include actual plans, pipeline locations, future projects, or any other data.

Clicking on lightning bolt shaped icons links to a project master document which contains a project overview and links to more data and pictures.

Clicking on the lightning bolt for the Redfish Island project links to this document.

<div>Redfish Island Beneficial Uses of Dredged Material</div> <div>AUTHORITY: WRDA 1996 (P.L. 104-303)</div> <div>PROJECT MANAGER:</div> <div>CONGRESSIONAL INEREST:</div> <div>SPONSOR(S): Port of Houston Authority, City of Galveston</div> <div>MILESTONES:</div> <div>DESCRIPTION:<ul style="list-style-type: none">▪ Subsidence and erosion called for restoration to 1970 configuration using fossil shell▪ Stiff clay and other non-shell materials are not suitable for restoring, due to the potential impacts of surrounding oyster reefs</div> <div>ONGOING ACTIVITIES:</div> <div>PRE-IMPLEMENTATION PHASE COMPLETION DATE:</div> <div>Links:<ul style="list-style-type: none">▪ Pictures:<ul style="list-style-type: none">○▪ Presentations:<ul style="list-style-type: none">○</div>
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The project master document is kept up to date and acts as an easy point of reference for finding project related data.

Clicking on the first picture link in the Redfish Island master document leads to this picture.



Lack of Funding (Stakeholder Workshops)

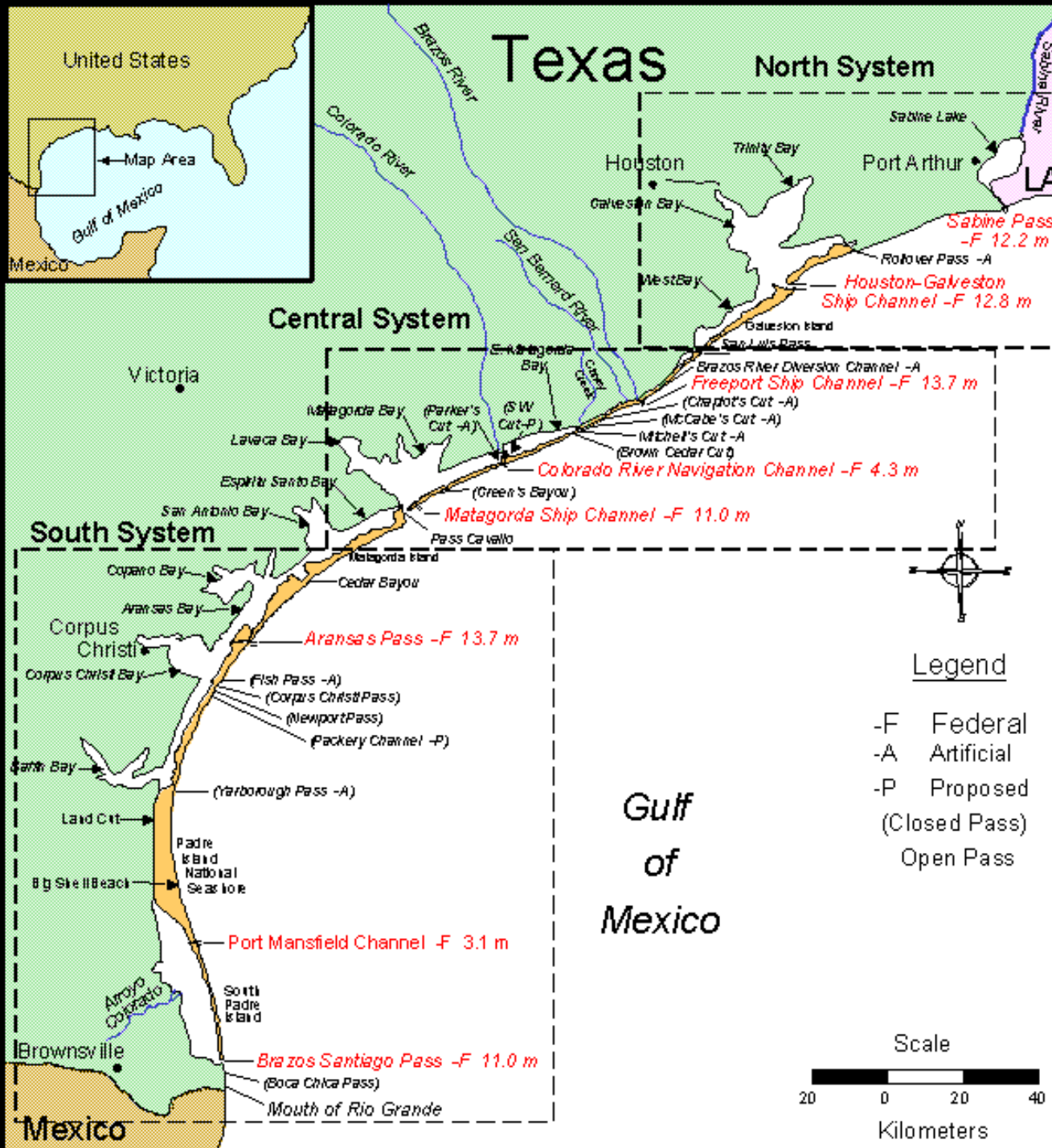
- Use Coastal Texas 2020 as a vehicle to address increased funding with the state legislature.
- Encourage the creation of more coastal task forces in Texas.
- Perform peer reviewed regional economic studies that demonstrate the benefits of RSM.
- Demonstrate the potential return on investment to justify and prioritize funding.
- Prove to the public how a dollar can be stretched through cooperation of local coastal task forces, state, Federal, River Authorities, etc.

3 Distinct Systems

NORTH
-SNWW
-HGNC

CENTRAL
-FH
-MSC

SOUTH
-CCSC
-BIH



Navigation Operations

Ronnie Barcak - PM

Planning & Environmental

Jeff Waters – PL

Rob Hauck - EL

Galveston District RSM PDT

Real Estate

Ana Gordon

Engineering & Construction

Lynn Robinson – H&H

Tim Few – Geotech

Luis Saenz – NAO

Rob Thomas – H&H

Regulatory

Denise Sloan

State of Texas

Ray Newby – Tx General Land Office

Depth, m msl
191.80
167.20
142.60
118.00
93.40
68.80
44.20
19.60
-5.00



Texas



US Army Corps
of Engineers
New Orleans District

Louisiana



US Army Corps of Engineers
MOBILE DISTRICT

Florida Panhandle



Florida

Mexico

GOMEX

Lynn Martin - IWR

Cuba

Yucatan Peninsula

Regional Sediment Management



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